Remarks

Claims 1-61 are pending in the application. All claims stand rejected. By this paper, claims 1, 20, 39, and 60 have been amended. New claim 62 has been added. Reconsideration of all pending claims herein is respectfully requested.

Claims 1-61 were rejected under 35 U.S.C. 103(a) as being unpatentable over Arnott and Miller et al. ("Miller"). This rejection is respectfully traversed.

Claim 1 has been amended merely to clarify the following arguments, which are believed to be equally applicable to the claims as originally filed. As amended, claim 1 recites a method for displaying video streams received from multiple terminals linked by a network, comprising:

> receiving a plurality of video streams at a network terminal;
>
> simultaneously displaying the video streams in a user interface provided by the network terminal;
>
> ranking at least a portion of the video streams according to a set of ranking criteria, and
>
> arranging at least a portion of the simultaneously-displayed video streams within the user interface in order of rank.

These claimed features relate to creating a user interface to be displayed on a network terminal, such as a television/set top box combination. The claimed user interface includes a plurality of simultaneously-displayed video streams, which may be derived, for example, from multiple webcams. In other words, the same user interface may display the feeds from several webcams. As illustrated in FIG. 6, for example, a user interface shown on a television screen may include twelve or more different video streams (401a-401l) at the same time.

However, the claimed invention goes beyond merely displaying multiple video streams in the same interface. It also relates to the arrangement of the video streams within the interface in a particular way (*e.g.*, in order of rank). Certain streams may be more important (have a higher rank) due to a number of factors, including the time of day, the day of the week, an indication of popularity, whether a scene change has been detected, etc.

Additionally, certain locations or positions in the user interface may be designated for video streams of greater rank. For example, in the user interface of FIG. 6, the upper-left corner of the screen may be used for the video stream of highest rank. Thus, the video streams in the user interface may be continuously rearranged as the rankings change, as shown in FIG. 7.

The Examiner admits that Arnott does not disclose ranking video streams and arranging at least a portion of the displayed video streams in order of rank. However, the addition of Miller does not cure the deficiencies of Arnott.

Miller does not **simultaneously** display multiple video streams in a user interface provided by **the** network terminal, as claimed.

Miller says absolutely nothing about simultaneously-displaying a plurality of video streams within the same user interface ("a user interface provided by the network terminal"). The Examiner is apparently equating this element with Miller's transmission of individual video streams to requesting customers. Page 2, paragraph 21. However, there is no teaching or suggestion in Miller for showing multiple video streams on the same terminal, let alone showing multiple video streams in a grid arrangement (claim 9) as shown in FIG. 6 of the present application. Likewise, Miller

does not disclose or suggest arrangement of the video streams in a "ticker" or "moving carousel" format as recited in claims 12 and 13, respectively, and illustrated in FIG. 7. The Examiner merely cites to page 13, paragraph 1 of Miller, which reads, *in toto*, as follows:

> After the local video cache has received 3-10 seconds of video content, it signals the home cache 109 that it is ready to transmit the content and after receiving an acknowledgement from the home cache, begins to transmit the video content. After the home cache has received 3-10 seconds of video content, it begins to play the material to the end user through the viewer of choice, either a personal computer 110 or a television 111. The home cache 109 and the local center video cache 108 maintain a flow of communication about the status of the fill level of the local center video cache 108 and ensures that a sufficient rate of content is transmitted to the home cache 109 to continuously enable an uninterrupted video stream to the end user.

The applicants respectfully request that the Examiner point out where the terms "grid" or "ticker" (or any reasonable equivalent thereto) are taught or suggested in this quoted passage. Tickers and grids are two very different arrangements of video streams, yet the Examiner cites to the same paragraph of Miller for both.

Miller's "ranking" (prioritization) has nothing to do with the **arrangement** of multiple video streams **within a user interface**

Miller simply discloses bandwidth prioritization by a "stream manager 113, which dynamically allocates available bandwidth to individual video streams based on an algorithm that sends more content to the local center video cache when there is available bandwidth and less when the transmission path 112 is nearing its overall capacity." Page 2, paragraph 16. The video streams may be sent to a customer when the customer "initiates a request for a specific file of video content." Page 2, paragraph 21.

However, deciding which video streams are to be sent to a video cache has nothing whatever to do with arranging a plurality of video streams within a single user interface, as claimed. Miller's video streams are simply sent on demand to requesting customers. Miller is completely silent about how these video steams are to be displayed on a customer's screen or how two or more video streams may be arranged relative to one another.

Miller does not disclose arranging at least a portion of the **simultaneously-displayed** video streams **within the user interface** in order of rank, as claimed

Claim 1 has been amended to make more explicit the fact that the video streams are being (1) simultaneously-displayed and are (2) arranged within the user interface in order of rank. Variations of these limitations were included in original claims 58, 59, and 61. Assuming the "arranging" step of claim 1 was confused with Miller's caching prioritization, it can no longer be so confused in light of the amendments. The claimed arranging according to rank takes place within the user interface and among a plurality of simultaneously-displayed video streams. None of the cited references teaches or suggests displaying multiple video streams within the same user interface, let alone arranging the multiple video streams within the user interface in order of rank.

Many of the recited claims make no sense in the context of Arnott-Miller. Claim 10, for example, recites that a video stream displayed near the top of the user interface has a higher rank than a video stream displayed near the bottom of the user interface. This limitation makes absolutely no sense in the context of Miller's caching

prioritization. Neither Arnott nor Miller make specific reference to a "top" or "bottom" of a user interface including multiple video streams. The Examiner cites to page 2, paragraph 19 of Miller, which, *in toto*, reads:

> Utilization of the local center video cache 108 allows for the opportunity for the local center video server 103 to signal the video server 106 at the national center to retransmit data packets when they have been lost or corrupted during transmission. Upon retransmission, lost packets can be inserted into the video cache 108 in the correct sequence prior to transmitting the information to the home cache 109. Similarly, the video decoder located in the television 110 (or a set top box adjunct) or in the personal computer 111, will have an opportunity to signal the local center video server 103 for retransmission when a packet has been lost or corrupted during transmission from the local center to the home. Upon retransmission, lost packets can be inserted into the home cache 109 in the correct sequence prior to transmitting the information to the computer or television of the end user.

The applicants are at a loss to find within the quoted passage any discussion, teaching, or suggestion of a "top" or "bottom" of a user interface, and respectfully asks that the Examiner specifically point out where these limitations are shown or described.

None of the cited references disclose the recited methods for ranking video streams in order to affect their arrangement within a user interface

Clams 2-8 recite different approaches for ranking the video streams, *i.e.*, recency of scene changes (claim 2-3), frequency of scene changes (claim 4), popularity (claim 5), time of day (claim 6), day of the week (claim 7), etc. Miller may utilize some of the above factors for determining whether to cache certain video streams. However, this has nothing whatever to do with determining how to arrange multiple video streams on a screen according to some type of priority or rank.

Contrary to the Examiner's assertions, Miller does not disclose or suggest detecting a scene change within a first video stream and promoting the first video stream to a higher rank, as recited in claim 2. The Examiner points to Miller's prioritization of live streams when compared with pre-recorded streams. However, the Examiner does not explain how this constitutes a "scene change" within any reasonable interpretation of the phrase. The present application explains that a scene change may occur when an object enters the field of view of a webcam. This may be advantageous, for example, when a plurality of webcams are used for security monitoring. See page 17. Miller does not disclose or suggest prioritization based on scene changes, let alone arrangement of multiple video streams based on scene changes.

Similarly, Miller does not disclose or suggest promoting video streams based on the time of day or day of the week, as recited in claims 5 and 6, respectively. The portions of Miller referenced by the Examiner (page 2, paragraphs 0022 and 0023), merely disclose that the home caches must be kept relatively small, *e.g.*, 1-10 seconds, in order to maintain the live characteristics of a broadcast. The applicants respectfully question how this implies time-of-day or day-of-week rankings of video streams. These limitations are simply not taught or suggested by Miller.

None of the cited references disclose **rearranging** the video streams within the user interface to reflect a change in rank

New claim 62 recites the step of rearranging at least a portion of the simultaneously-displayed video streams within the user interface to reflect a change in rank associated with a first video stream. This step is illustrated in FIG. 7 of the

present application, in which one video stream is promoted to the upper-left corner of the screen to indicate a change in rank. None of the cited references disclose or suggest arranging multiple video streams by rank, let alone rearranging the video streams in response to a change in rank. Deciding which video streams to cache, as in Miller, is not remotely analogous to determining an on-screen arrangement or rearrangement of simultaneously-displayed video streams.

Conclusion

As argued above, none of the cited references disclose or suggest at least the following limitations of claim 1:

(1) simultaneously displaying the video streams in a user interface provided by the network terminal;

(2) ranking at least a portion of the [displayed] video streams according to a set of ranking criteria [for purposes of arranging the video streams on the screen], and

(3) arranging at least a portion of the simultaneously-displayed video streams within the user interface in order of rank.

"To establish prima facie obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art." MPEP § 2143.03. Because these limitations are not taught or suggested by either of the cited references, a prima facie case of obviousness has not been established.

Accordingly, claim 1 is believed to be patentably distinct over the cited references. Claims 20, 39, and 60 have been amended to include similar limitations

and are believed to be patentably distinct for at least the same reasons. As noted above, original claims 58, 59, and 61 already include similar limitations and are also believed to be patentably distinct. All other claims depend directly or indirectly from one of the foregoing independent claims. All claims are therefore believed to be in condition for allowance. A Notice of Allowance is respectfully requested.

Respectfully submitted,

Digeo, Inc.

By _____
Kory D. Christensen
Registration No. 43,548

STOEL RIVES LLP
One Utah Center Suite 1100
201 S Main Street
Salt Lake City, UT 84111-4904
Telephone: (801) 328-3131
Facsimile: (801) 578-6999